

**DETAILED ACTION**

**EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.
2. Authorization for this examiner's amendment was given in a telephone interview with Mr. David J. Gaskey (Reg. #37,139) on June 15, 2010.
3. The application has been amended as follows:
  - In claim 1, line 8, "estimated traffic pattern" has been changed to ---estimated elevator traffic pattern---
  - In claim 17, line 16, "estimated traffic pattern" has been changed to ---estimated elevator traffic pattern---
  - In claim 21, line 3, "a storage medium" has been changed to ---a non-transitory storage medium--- in order to avoid an interpretation of a storage medium that covers forms of transitory tangible media and transitory propagating signals *per se*.
  - In claim 21, line 8, "estimated traffic pattern" has been changed to ---estimated elevator traffic pattern---

***Allowable Subject Matter***

Art Unit: 2857

4. Claims 1-6, 8-15, and 17-25 are considered to be allowable over the cited prior art for the following reasons:

JP Patent Publication No. 2004075221 to Maeda et al. discloses a method of modeling a condition of an elevator tensile support (0008, lines 2-14) comprising; determining a rate of degradation of the tensile support for a selected load using at least one sample tensile support and a fatigue machine (0020, lines 1-6 and 0023, lines 1-4); modeling a configuration of at least one selected elevator system (0012, lines 1-10 and 0016, lines 1-5); estimating an elevator traffic pattern (0016, lines 1-5); determining sheave contact and load information using the modeled configuration and the estimated traffic pattern (0016, lines 5-10); and determining a mean degradation of the tensile support from the determined rate of degradation and the determined sheave contact and load information (i.e. a range of damage values over a plurality of positions of the rope) (0021, lines 6-14).

U.S. Patent Application Publication No. 2004/0046540 to Robar et al. teaches a method and apparatus for detecting elevator rope degradation using electrical energy comprising means for determining a relationship between an electrical characteristic and a selected condition of a tensile support (0049, lines 1-8) and using the determined relationship for determining an apparent electrical characteristic value corresponding to the selected condition of the tensile support (0051, lines 1-11), wherein the electrical characteristic is resistance (0049, lines 1-8). Robar teaches repeatedly determining a plurality of the apparent electrical

Art Unit: 2857

characteristic values and using the values to determine a relationship between a corresponding measured electrical characteristic and a condition of a tensile support (0042, lines 1-14 and ) and subsequently measuring a resistance of at least a portion of the tensile support and using the determined relationship between resistance and the selected condition of the tensile support to determine a current condition of the tensile support (0047, lines 1-7).

JP Patent No. 11035246 to Ishida et al. discloses a method of modeling a condition of an elevator tensile support (0007, lines 1-4), comprising; modeling a configuration of at least one selected elevator system (0012, lines 1-8), estimating an elevator traffic pattern (0013, lines 1-17), and determining sheave contact and load information using the modeled configuration and the estimated traffic pattern (0012, lines 8-11 and 0013, lines 1-17).

U.S. Patent Application Publication No. 2002/0194935 to Clarke discloses a system for determining a condition of an elevator tensile support (0022, lines 2-4) comprising a device for measuring an electrical characteristic of at least a portion of a tensile support (0021, lines 1-11) and a controller that determines a current condition of the tensile support (0016, lines 5-8, 0021, lines 1-11, and 0028, line 1 to 0029, line 3) by relating the measured characteristic to a predetermined data set indicating a relationship between corresponding apparent characteristic values and conditions of the tensile support, the relationship being based upon load information

Art Unit: 2857

(0028, lines 1-11).

U.S. Patent No. 6,260,343 to Pouradian teaches high-strength, fatigue resistant strands and wire ropes for use in lifts (column 1, lines 15-23) wherein a condition of a tensile support is determined based upon a determined rate of degradation over time of the tensile support for a constant load (column 6, line 59 to column 7, line 28).

As noted above, the cited prior art teaches many features of the claimed invention. None of the cited prior art, however, teaches, or suggests, in combination with the other claimed limitations for a method of modeling and/or system/controller for determining a condition of an elevator tensile support, generating a first map from a determined mean degradation, generating a second map correlating an electrical characteristic with a selected degree of strength degradation, and combining the first and second maps to generate a third map correlating the electrical characteristic with a remaining strength in the tensile support, wherein the mean degradation is determined from a determined rate of degradation, for a selected load, and sheave contact and load information determined from a modeled elevator system configuration and an estimated elevator traffic pattern.

5. Any comments considered necessary by Applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

Art Unit: 2857

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey R. West whose telephone number is (571)272-2226. The examiner can normally be reached on Monday through Friday, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eliseo Ramos-Feliciano can be reached on (571)272-7925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2857

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jeffrey R. West/  
Primary Examiner, Art Unit 2857

June 17, 2010